

Nip: 1 gggggtagactttagccggacgcggggcatcagccatg~~tcgagggtcttccc~~tacccg 60
Rufi: 1 acgcggggcatcagccatg~~tcgagggtcttccc~~tacccg 60
START

Nip: 61 ccgcggggtacg~~tgcgaaacc~~cagtggtgccgtggccggccgaagcg~~caggcgacc~~ 120
Rufi: 61 cgcggggtacg~~tgcgaaacc~~cagtggtgccgtggccggccgaagcg~~caggcgacc~~ 120

Nip: 121 actaagctccagaaa~~aggaaaagg~~ctgaaa~~agaagaaaagg~~agt~~gacagg~~ 180
Rufi: 121 actaagctccagaaa~~aggaaaagg~~ccgc~~aaaaa~~ag~~aaaaa~~ag~~aaaaa~~ag~~gtgacagg~~ 180

Nip: 181 aaagcttccacatgtgagat~~tccaagcattcaaa~~agg~~caaccacc~~acaagaagaga 240
Rufi: 181 aaagcttccacatgtgagat~~tccaagcattcaaa~~agg~~caaccac~~---aagaagaga 237

Nip: 241 aaacatgaagacataatgt~~gtatcagaatgtcccgaa~~agg~~tttcttcatggaa~~acct 300
Rufi: 238 aaacatgaagacataatgt~~gtatcagaatgtcccgaa~~agg~~tttcttcatggaa~~acct 297

Nip: 301 ggtgagcaattggaa~~aggatggactctcagaagag~~catgg~~actcttgc~~ttactcag 360
Rufi: 298 ggtgagcaattggaa~~aggatggactctcagaagag~~catgg~~actcttgc~~ttactcag 357

Nip: 361 acagagcatggcttc~~ccagagatgtt~~cacaggac~~acgcaga~~aa~~gaga~~aaa~~agg~~ttgtta 420
Rufi: 358 acagtgc~~atggcttc~~ccagagat~~gtt~~cacaggac~~acgcaga~~aa~~gaga~~aaa~~agg~~ttgtta 417

Nip: 421 cccagtcc~~tagcca~~ac~~taaga~~at~~gttgc~~a~~atc~~c~~ttcg~~g~~aataa~~ag~~ataaga~~ag~~atcaa~~ 480
Rufi: 418 cccagtcc~~tagcca~~ac~~taaga~~at~~gttgc~~a~~atc~~c~~ttcg~~g~~aataa~~ag~~ataaga~~ag~~atcaa~~ 477

Nip: 481 gattttc~~ca~~gttcc~~ttcg~~g~~aaatcta~~at~~gttgc~~at~~aaaccc~~at~~ttcatcaatg~~ 540
Rufi: 478 gattttc~~ca~~gttcc~~ttcg~~g~~aaatcta~~at~~gttgc~~at~~aaaccc~~at~~ttcatcaatg~~ 537

Nip: 541 ggatc~~atgtt~~cat~~ctgc~~ca~~aggtaa~~aaaa~~actcaatgc~~acc~~acaca~~acc~~gaaatg~~ 600
Rufi: 538 ggatc~~atgtt~~cat~~ctgc~~ca~~aggtaa~~aaaa~~actcaatgc~~acc~~acaca~~acc~~gaaatg~~ 597

Nip: 601 at~~gggtgaga~~ac~~agcatca~~acc~~cagc~~aa~~gcata~~agg~~gtat~~ttca~~aggatcg~~atccg 660
Rufi: 598 at~~gggtgaga~~ac~~agcatca~~acc~~cagc~~aa~~gcata~~agg~~gtat~~ttca~~aggatcg~~actcg 657

Nip: 661 aaacaagg~~atgc~~ca~~accc~~cag~~caa~~agg~~atgc~~ca~~aggatcg~~at~~gttccatctatg~~ 720
Rufi: 658 aaacaagg~~atgc~~ca~~accc~~cag~~caa~~agg~~atgc~~ca~~aggatcg~~at~~gttccatctatg~~ 717

Figure 1

```

Nip: 721 agggcatcaaaggaaaggattggcccttcgcctgcagagatgtggccaatgttgtct 780
Rufi: 718 agggcatcaaaggaaaggattggcccttcgcctgcagagatgtggccaatgttgtct 777

Nip: 781 tcacccctcaaggcaaaaacagattgtcaatccctgcagctgctaaggtaacaaaaggtt 840
Rufi: 778 tcacccctcaaggcaaaaacagattgtcaatccctgcagctgctaaggtaacaaaaggtt 837

Nip: 841 gatcctccacccgtccaggcatctcagagattgtatccctctgttgcacatccaggttcat 900
Rufi: 838 gatcctccacccgtccaggcatctcagagattgtatccctctgttgcacatccaggttcat 897

Nip: 901 atagatgtactcgattttacgaaggtttcccgacagagatcaaggccgaagtacag 960
Rufi: 898 atagatgtactcgattttacgaagctctcccgacagagatcaaggccgaagtacag 957

Nip: 961 cccccaattctgaagggtgcctgtggctatgcctaccatcaatcgtagcaggatgtacacc 1020
Rufi: 958 cccccaattccgaagggtgcctgtggctatgcctaccatcaatcgtagcaggatgtacacc 1017

Nip: 1021 tcgcagccccaaaagaagagccctgtccctctggcaggaaatgtcaagctgtttcgtatca 1080
Rufi: 1018 tcgcagccccaaaagaagagccctgtccctctggcaggaaatgtcaagctgtttcgtatca 1077

Nip: 1081 gttagagaagcagtccaaagtccatgcggccaaaaagagccgcaggctgagaagaaaagagaag 1140
Rufi: 1078 gttagagaagcagtccaaagtccatgcggccaaaaagagccgcaggctgagaagaaaagagaag 1137

Nip: 1141 aagttcaaaagattttgttacccggatccctccgttatggaaatggatgtatggat 1200
Rufi: 1138 aagttcaaaagattttgttacccggatccctccgttatggaaatggatgtatggat 1197

Nip: 1201 ctggggaccaggattggctgttatgtacggaaaacctgtatggcattggcaac 1260
Rufi: 1198 ctggggaccaggattggctgttatgtacggaaaacctgtatggcattggcaac 1257

Nip: 1261 tgcagagaaaattgttacccacttacttctcaatcagcagacgttctcattgcggct 1320
Rufi: 1258 tgcagagaaaattgttacccacttacttctcaatcagcggagcgttctcattgcggct 1317

Nip: 1321 aggggcatttcatttacccagacccatgtcttatcgttgcacatgtggccatttttag 1380
Rufi: 1318 aggggcatttcatttacccagacccatgtcttatcgttgcacatgtggccatttttag 1377
STOP
Nip: (nucleotides 1-36 of SEQ ID NO:4 and SEQ ID NO:5)
Rufi: (nucleotides 1-17 of SEQ ID NO:27 and SEQ ID NO:29)
```

Figure 1 (continued)

Nip: 1 MSRCFPYPPPGYVRNPVVAVAAEAQATTKLQKEREKAEEKKKEKRSDRKALPHGEISKHS 180
Rufi: 1 MSRCFPYPPPGYVRNPVVAVAAEAQATTKLQKEREKAEEKKKEKKSDRKALPHGEISKHS 180

Nip: 181 KRTHHKKRKHEDINNADQKSRKVSSMEPGEQLEKSGLSEEHGAPCFTQTEHGSPESSQDS 360
Rufi: 181 KRTH-KKRKHEDINNADQKSRKVSSMEPGEQLEKSGLSEEHGAPCFTQTVHGSPESSQDS 360

Nip: 361 SKRRKVVLPSPSQAKNGNIIIRIKIRRDQDSSASLSEKSNSVVQTpvHQMGSVSSLPSKKNs 540
Rufi: 361 SKRRKVVLPSPSQAKNGNIIIRIKIRRDQDSSASLSEKSNSVVQTpvHQMGSVSSLPSKKNs 540

Nip: 541 MQPHNTEMMVRTASTQQQSIKGDFQAVPKQGMPTPAKVMPRVDVPPSMRASKERIGLRPA 720
Rufi: 541 MQPHNTEMMVRTASTQQQSIKGDFQAVLKQGMPTPAKVMPRVDVPPSMRASKERVGLRPA 720

Nip: 721 EMLANVGPSPSKAKQIVNPAAAKVTQRVDPPPAAKASQRIDPLLPSPKVHIDATRSFTKVSQ 900
Rufi: 721 EMLANVGPSPSKAKQIVNPAAAKVTQRVDPPPAAKASQRIDPLLPSPKVHIDATRSFTKLSQ 900

Nip: 901 TEIKPEVQPP[LKVPVAMPTINRQQIDTSQPKEEPCSSGRNAEAAASVSVQSKSDRKKS 1080
Rufi: 901 TEIKPEVQPP[PKVPVAMPTINRQQIDTSQPKEEPCSSGRNAEAAASVSVQSKSDRKKS 1080

Nip: 1081 RKAEKKEKKFKDLFVTWDPPSMEMDMDMLGDQDWLLDSTRKPDAIGNCREIVDPLTSQS 1260
Rufi: 1081 RKAEKKEKKFKDLFVTWDPPSMEMDMDMLGDQDWLLGSTRKPDAIGNCREIVDPLTSQS 1260

Nip: 1261 AEQFSLQPRAIHLPLDLHVYQLPYVVPF 1344 (SEQ ID NO:6)
Rufi: 1261 AEQFSLQPRAIHLPLDLHVYQLPYVVPF 1344 (SEQ ID NO:30)

Figure 2

10075042-0261902

3061020-24067000

Maize: 1 **gcatgtcgagggtgttccccataccggccacggggtacgctg**cggaaccaggatggccgtgg 60
Teo: 1 **atgtcgagggtgttccccataccggccacggggtacgctg**cggaaccaggatggccgtgg 60
 START

Maize: 61 **ccgagccggagtcgaccgcataagctctgtaa**ggaaaaggaaaaaggccgaaaagaagaag 120
Teo: 61 **ccgagccggagtcgaccgcataagctctgtaa**ggaaaaggaaaaaggccgaaaagaagaag 120

Maize: 121 **agaaaaggagtgcacggaaagctcccaagcagtgtqagacgtccaaacattcaa**gaca 180
Teo: 121 **agaaaaggagtgcacggaaagctcccaagcagtgtqagacgtccaaacattcaa**gaca 180

Maize: 181 **gccataagaagagaaagcttgaagatgtcatcaaagctgagcagggtccaaaagagat**ac 240
Teo: 181 **gccataagaagagaaagcttgaagatgtcatcaaagctgagcagggtccaaaagagat**ac 240

Maize: 241 **ccaaagaatcagttgagcagtggagaaagatggactctcagaagacatggagtc**ctt 300
Teo: 241 **ccaaagaatcagttgagcagtggagaaagatggactctcagaagacatggagtc**ctt 300

Maize: 301 **cttttgatcacatacgatacgtgacttccctgagagctcacaggacagcggcaagacgaa** 360
Teo: 301 **cttttgatcacatacgatacgtgacttccctgagagctcacaggacagcggcaagacgaa** 360

Maize: 361 **agtttgtccctgtccagtccttagccaaacctaagaatggaaacattttcgcttcaagatta** 420
Teo: 361 **agtttgtccctgtccagtccttagccaaacctaagaatggaaacattttcgcttcaagatta** 420

Maize: 421 **aaagtagtcaagayccccatcagtcgttctggagaaaccaagggttcttgcacccat** 480
Teo: 421 **aaagtagtcaagatccccatcagtcgttctggagaaaccaagggttcttgcacccat** 480

Maize: 481 **tggtcceacaaatggatcagggttcatcccgtcgccgaacaaattcaatccatcata** 540
Teo: 481 **tggtcceacaaatggatcagggttcatcccgtcgccgaacaaattcaatccatcata** 540

Maize: 541 **agatgaatgtgagatctacctctgtcagcgagggtcgatggtaactcccaagcgtac** 600
Teo: 541 **agatgaatgtgagatctacctctgtcagcgagggtcgatggtaactcccaagcgtac** 600

Maize: 601 **aaaaatgtttgattacagaatccccggcaaagaccatgcagagacttgtccccagcctg** 660
Teo: 601 **aaaaatgtttgattacagaatccccggcaaagaccatgcagagacttgtccccagcctg** 660

Maize: 661 **cagctaaggcacacatccgttgcattcccaagtcagttaaagggtccaggatggaaagat** 720
Teo: 661 **cagctaaggcacacatccgttgcattcccaagtcagttaaagggtccaggatggaaagat** 720

Figure 3

Maize: 721 cgggcctaccttgcaggatgtggacccttcgcctgctagagtttagaa 780
Teo: 721 cgggcctaccttgcaggatgtggacccttcgcctgctagagtttagaa 780

Maize: 781 gatttgcacccctgttaagatgtgtcacagaggttccccatcccgatgg 840
Teo: 781 gatttgcacccctgttaagatgtgtcacagaggttccccatcccgatgg 840

Maize: 841 tgtcgcagaaagtgtatccctcggttccaggatgttacataaggaaaccggatctgttg 900
Teo: 841 tgtcgcagaaagtgtatccctcggttccaggatgttacataaggaaaccggatctgttg 900

Maize: 901 ttgcctaccagaagactaccggcctactgtttccaaacccaaggacttcgtcta 960
Teo: 901 ttgcctaccagaagactaccggcctactgtttccaaacccaaggacttcgtcta 960

Maize: 961 tcaagcagcaggatatcaggacccttcctccaaaagaagagccctgttctctggtagga 1020
Teo: 961 tcaagcagcaggatatcaggacccttcctccaaaagaagagccctgttctctggtagga 1020

Maize: 1021 atgcagaagcgttcaagtgcagatactaaatgtctccggtcagacatgaagaaaatcc 1080
Teo: 1021 atgcagaagcgttcaagtgcagatactaaatgtctccggtcagacatgaagaaaatcc 1080

Maize: 1081 gcaaagctgaaaaaaaaaaaaatggaaaggatggaaaggatctggttacctggatccgttat 1140
Teo: 1081 gcaaagctgaaaaaaaaaaaaatggaaaggatggaaaggatctggttacctggatccgttat 1140

Maize: 1141 tgatagagaatgaaggatctggatcatggtaaaggactggctgttgcagatggataaaagga 1200
Teo: 1141 tgatagagaatgaaggatctggatcatggtaaaggactggctgttgcagatggataaaagga 1200

Maize: 1201 actccatgtatcatggtaaaggactggatcatgtatgttttcggatccatccaa 1260
Teo: 1201 actccatgtatcatggtaaaggactggatcatgtatgttttcggatccatccaa 1260

Maize: 1261 tggcgcggcggatccatgttttacaacccaggccacatggatccatggatccatccaa 1320
Teo: 1261 tggcgcggcggatccatgttttacaacccaggccacatggatccatggatccatccaa 1320

Maize: 1321 accagctggccatgttgcgttccatggatccatggatccatggatccatccaa 1380
Teo: 1321 accagctggccatgttgcgttccatggatccatggatccatggatccatccaa 1380
STOP

Maize: 1381 gatgtggagagactg
Teo: 1381 gatgtggagagactgtgttgcggatccatggatccatggatccatccaa 1422

Maize: (nucleotides 1-2 of SEQ ID NO:33, SEQ ID NO:35,
and nucleotides 1399-1447 of SEQ ID NO:34)
Teo: (SEQ ID NO:66, and nucleotides 2581-2620 of SEQ ID NO:67)

Figure 3 (continued)

Maize: 1 MSRCFPYPPPGYVRNPVAVAEPESTAKLLKEKEKAEKKKEKRSDRKAPKQCETSKHSKHS 180
Teo: 1 MSRCFPYPPPGYVRNPVAVAEPESTAKLLKEKEKAEKKKEKRSDRKAPKQCETSKHSKHS 180

Maize: 181 HKKRKLEDVIKAEQGPKRVPKESVEQLEKSGLSEEHGAPSFVHTIRDSPESSQDSGKRRK 360
Teo: 181 HKKRKLEDVIKAEQGPKRVPKESVEQLEKSGLSEEHGAPSFVHTIRDSPESSQDSGKRRK 360

Maize: 361 VVLSSPSQPKNGNILRFKIKSSQDPQSAVLEKPRVLEQFLVQQMGSGLXSGKQNSIHKK 540
Teo: 361 VVLSSPSQPKNGNILRFKIKSSQDPQSAVLEKPRVLEQFLVQQMGSGLXSGKQNSIHKK 540

Maize: 541 MNVRSTSGQRVDGDSQAVQKCLITESPAKTMQRQLVPQPAAKVTHPVDPQSAVKPVGRS 720
Teo: 541 MNVRSTSGQRVRNGDSQAVQKCLITESPAKTMQRQLVPQPAAKVTHPVDPQSAVKPVGRS 720

Maize: 721 GLPLKSSGSVDPSPARVMRRFDPPPVMMSQRVHHPASMVSQKVDPFFPKVLHKETGSVV 900
Teo: 721 GLPLKSSGSVDPSPARVMRRFDPPPVMMSQRVHHPASMVSQKVDPFFPKVLHKETGSVV 900

Maize: 901 RLPEATRPTVLQPKKDLPAIKQQDIRTSSSKEEPFCFSGRNAEAVQVQDTKLRSRDMKKIR 1080
Teo: 901 RLPEATRPTVLQPKKDLPAIKQQDIRTSSSKEEPFCFSGRNAEAVQVQDTKLRSRDMKKIR 1080

Maize: 1081 KAEKKDKKFRDLFVTWPVLIENEGSDLGEDDWLFSSKRNSDAIMVQSRATDSSVPIHPM 1260
Teo: 1081 KAEKKDKKFRDLFVTWPVLIENEGSDLGEDDWLFSSKRNSDAIMVQSRATDSSVPIHPM 1260

Maize: 1261 VQQKPSLQPRATFLPDLNMYQLPYVVPF 1347 (SEQ ID NO:36)
Teo: 1261 VQQKPSLQPRATFLPDLNMYQLPYVVPF 1347 (SEQ ID NO:68)

Figure 4

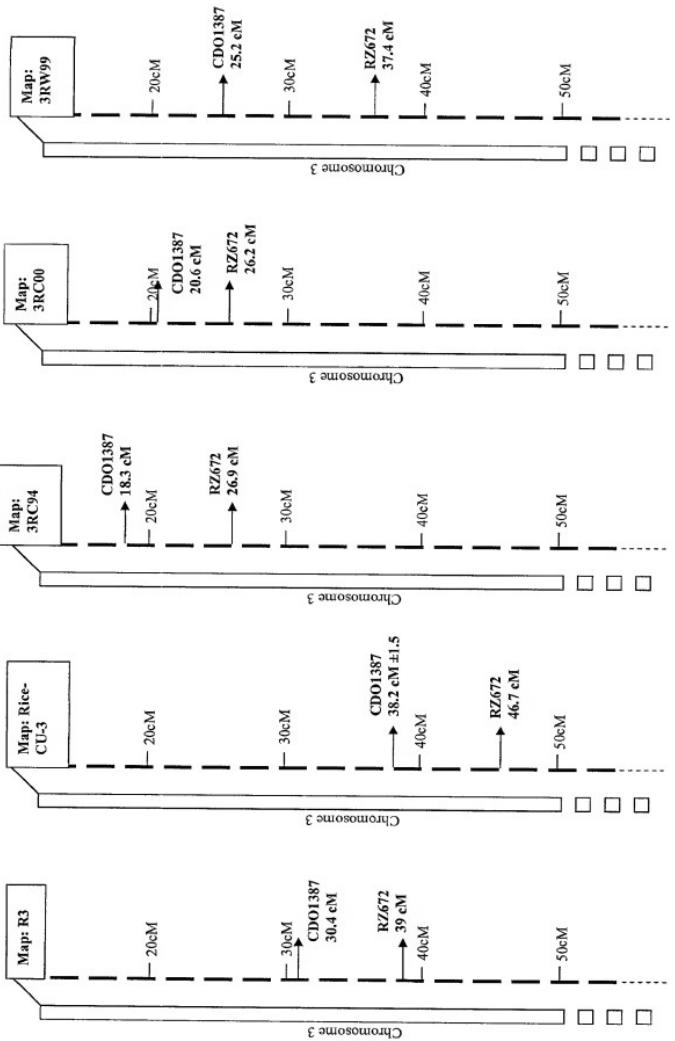


Figure 5